

1. (Currently Amended) An atomizer ~~Atomizer~~ device for the production of a liquid-gas mixture (4), the mixture (4) ~~produced preferably useful for~~ being introduced for the purpose of compression into a nozzle arrangement (3) in which the kinetic energy of the mixture (4) is in large part converted into compression energy of the gaseous component, ~~wherein the atomizer device (2) consists of~~ comprising:

_____ a nozzle member (20) which includes having an at least approximately substantially central pipe (16) for the gaseous medium, and a rotationally symmetrical nozzle chamber (18) surrounding this the pipe (16) for the liquid medium, the and a nozzle aperture; and

_____ a liquid feed (17) has having means for producing a swirled liquid flow in the nozzle chamber (18), and;

_____ wherein the liquid in a nozzle aperture (19) coaxially enclosing encloses the pipe (16) emerges from the nozzle member (20).

2. (Currently Amended) An atomizer ~~Atomizer~~ device according to claim 1, wherein the liquid feed (17) opens tangentially into the nozzle chamber (18).

3. (Currently Amended) An atomizer ~~Atomizer~~ device according to claim 1 or 2, wherein the nozzle aperture is annular, and the nozzle chamber (18) tapers to an the annular nozzle aperture (19).

4. (Currently Amended) A method ~~Method~~ for the production of a liquid-gas mixture (4) by ~~means of~~ an atomizer device (2), the mixture (4) produced useful for being introduced, ~~particularly for compression,~~ into a nozzle arrangement (3) in which the kinetic energy of the mixture (4) is in large part converted into compression energy of the gaseous component, ~~wherein the method comprising:~~

_____ causing a swirled liquid flow emerges to emerge from a nozzle aperture (19) of the atomizer device (2) and produces to produce a swirling hollow conical spray (21) expanding in the a flow direction, and to produce a reduced pressure zone within the spray; and

_____ causing the gaseous medium (13) enters to enter the reduced pressure zone via a

central feed (16) into the reduced pressure zone (22) formed within the hollow conical shaped spray (21).

5. (Currently Amended) A method ~~Method~~ according to claim 4, wherein comprising:

producing the swirled liquid flow is ~~produced~~ in a nozzle chamber (18) surrounding the pipe (16) for feeding the gaseous medium central feed.

6. (Currently Amended) A method ~~Method~~ according to claim 5, wherein comprising:

introducing the swirled liquid flow in the nozzle chamber (18) is ~~produced~~ by ~~means of through~~ at least one liquid feed (17) opening tangentially into the nozzle chamber (18).